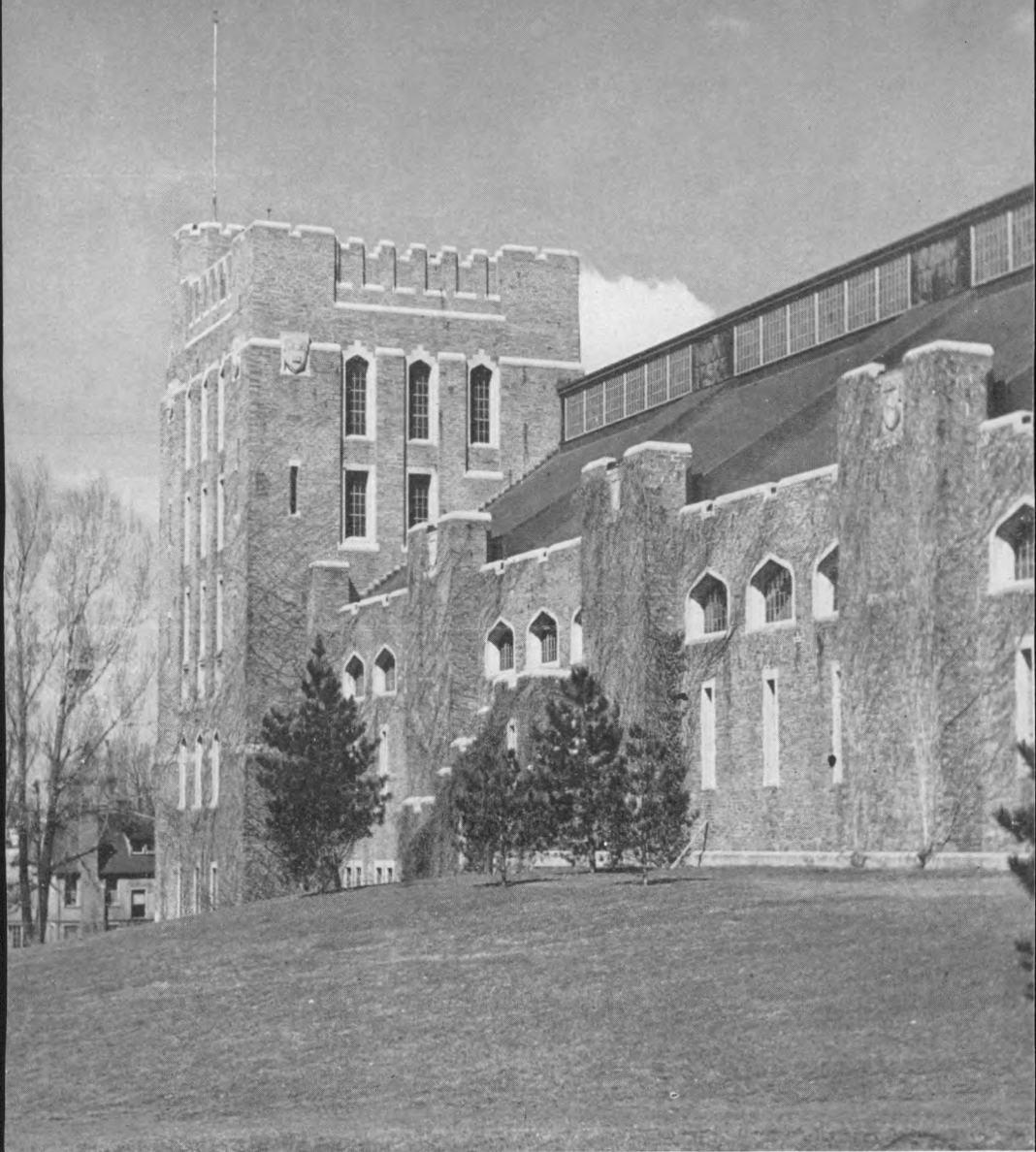


SECTION I

Announcement



In accordance with the terms of its charter as a land grant institution under the Morrill Act of 1862, Cornell offers instruction in Military Science and Tactics. This work is centered in Barton Hall, named in memory of Colonel Frank A. Barton, a graduate in the class of 1891 and commanding officer of the Reserve Officers Training Corps at Cornell for many years. The building covers an area of more than two acres and includes a drill hall larger than a regulation football field.

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Faculty

Edmund Ezra Day, Ph.D., LL.D.	<i>President of the University</i>
Ralph Hospital, Colonel, Field Artillery, U. S. Army	<i>Professor of Military Science and Tactics, and The Commandant</i>

ASSISTANT PROFESSORS OF MILITARY SCIENCE AND TACTICS

Philip B. Stiness, Lieutenant Colonel, Coast Artillery Corps, U. S. Army	<i>Commanding Artillery Unit; Assistant Plans and Training Officer</i>
Alexander N. Slocum, Jr., Lieutenant Colonel, Field Artillery U. S. Army	<i>Executive Officer; Plans and Training Officer</i>
John M. Hoffman, Major, U. S. Air Forces	<i>Commanding Air Unit; Supervisor of Freshman Instruction</i>
Raymond L. Hoff, Major, Quartermaster Corps U. S. Army	<i>Commanding Quartermaster Corps Unit, Adjutant and Special Services Officer. Adviser: Pershing Rifles</i>
Peter H. Comnas, Major, Field Artillery U. S. Army	<i>Commander Enlisted Detachment; Director of the Equitation Course; Artillery Instructor.</i>
Henri F. Frank, Major, Field Artillery U. S. Army	<i>Supervisor of Drill, Leadership, and Exercise of Command Instruction; Pistol Team Coach; Public Relations Officer; Bands Officer; Clef Club Officer; Artillery Instructor.</i>
Richard A. Shagrin, Major, Coast Artillery Corps U. S. Army	<i>Supervisor of Sophomore Instruction; Artillery Instructor.</i>
LeRoy F. Trott, Major, Signal Corps U. S. Army	<i>Commanding Signal Corps Unit and Communications Officer.</i>
Merrill C. Loudon, Captain, Ordnance Department U. S. Army	<i>Commanding Ordnance Unit; Ordnance and Motor Officer; Safety Officer; Rifle Team Coach</i>
Arthur G. Pinkham, Captain, Signal Corps U. S. Army	<i>Assistant Communications Officer; Signal Corps Instructor.</i>

Warren P. Laws,
Captain, U. S. Air Forces

Librarian; Air Instructor.

Clyde W. Raybuck,
Captain, Signal Corps,
U. S. Army

*Supply Officer; Quartermaster Corps
Instructor.*

Walter Callahan
1st Lieutenant, U. S. Air Forces

*Adviser: Cadet Officers' Club and
Scabbard and Blade; Air Instructor.*

Walter Mule
1st Lieutenant, Coast Artillery
Corps, U. S. Army

Air Communications Officer.

SPECIAL LECTURERS

Prof. G. P. Adams, Jr., Ph.D.
Prof. Knight Biggerstaff, Ph.D.
Prof. H. W. Briggs, Ph.D.
Prof. Mario Einaudi, Dr. Jur.
Prof. E. W. Fox, Ph.D.
Prof. Victor Lange, Ph.D.
Prof. F. G. Marcham, Ph.D.
Mr. R. B. Meigs, LL.D.

Prof. C. P. Nettels, Ph.D.
Prof. Lauriston Sharp, Ph.D.
Dr. E. C. Showacre, M. D.
Prof. A. E. Smith, Ph.D.
Prof. Marc. Szeftel, Ph.D., LL.D.
Dr. M. B. Tinker, Jr., A.B., M.D.
Prof. O. D. von Engeln, Ph.D.

ASSISTANT PROFESSOR

William A. Campbell, M. A., Director of Military Bands Course

ASSISTANTS

Master Sergeant Raymond R. Barber
Master Sergeant Clifford J. Gissell
Master Sergeant Theodore E. Tyskowski
Master Sergeant Troy L. Brannon
1st Sergeant Stephen Ryan
1st Sergeant James F. Cope
Technical Sergeant Charles R. Baker
Technical Sergeant Robert R. Green
Technical Sergeant Kenneth Hotelling
Technical Sergeant John H. Mains
Technical Sergeant Frank H. Page
Technical Sergeant William C. Swift
Staff Sergeant Allen J. Ellis
Staff Sergeant Stanley P. Frankewich
Staff Sergeant Clinton G. Kerns
Staff Sergeant John W. Kocalka
Staff Sergeant Robert T. Payne
Staff Sergeant Gerald S. Wentworth
Sergeant Daniel B. Bowman
Sergeant Raymond E. Evans
Sergeant Robert T. Brislin

CLERICAL STAFF

Miss Catherine M. Nolan, Secretary
Miss Mary L. Loughman, Records Clerk

General Information

THE MISSION OF THE DEPARTMENT

THE Reserve Officers Training Corps has two missions. The first is to produce junior officers who have the qualities and attributes essential to their progressive and continued development as officers of the Army of the United States. The second is to lay the foundations of intelligent citizenship within the student and to give him such basic military training as will be of benefit to himself and to the military service if he becomes a member thereof.

The Military Department at Cornell places special emphasis upon "Leadership", to assist Cornell men in meeting any situation in life with success and honor.

UNIVERSITY REQUIREMENTS

Military instruction is required during the first two years at Cornell University for all able-bodied male students, except veterans, who will be in residence for 8 terms.

REQUIREMENTS FOR ENROLLMENT IN THE R.O.T.C.

1. Citizen of the United States.
2. Physically qualified under standards prescribed by the War Department.
3. Accepted by the University as a regularly enrolled student of the institution.
4. For details of enrollment in Elementary and Advanced Courses, see the appropriate sections in this publication.

RESERVE COMMISSION

Completion of the four (4) year course of instruction qualifies the student for appointment as a 2nd Lieutenant in the Army of the United States or in the Air Force. If the entire course is not completed, and at a later date the student should become a member of the Military Service, that training completed would prove of material benefit.

UNIFORMS AND ALLOWANCES

ELEMENTARY COURSE...All students are required to deposit \$20.00 with the Treasurer of the University, prior to enrollment in the

Elementary Course. They are then furnished a uniform through the ROTC Supply Office. Any necessary repairs or replacement of articles of the uniform must be made by the student. An allowance is made by the Government to Elementary students which serves to reimburse them for the major portion of the above deposit. A student failing to provide himself with a uniform as prescribed above loses one-ninth of this Government allowance for each month of such failure.

Any student who has reason to believe that he may be prevented by physical disability from taking military training should make special arrangements for a prompt physical examination by the Medical Adviser so that, if disqualified, he will not draw and be charged with a uniform.

The deposit and uniform allowance actually earned by a student will be credited to his account in the Supply Office and upon his completion of the course, or his withdrawal therefrom, the account will be balanced and final settlement made by the University Treasurer's Office.

ADVANCED COURSE....An officer type uniform is furnished by the Government to each member of the Advanced Course. A deposit of \$20.00 with the Treasurer of the University is required by each Advanced Course student prior to enrollment.

Each Advanced Course student receives a monthly monetary allowance at a daily rate equal to the value of the commuted ration (currently 79 cents a day), not to exceed 570 days during the two-year course.

Students attending the ROTC summer camp, will in addition to the above, receive pay at the rate of \$75.00 a month, railroad fare, rations, and uniform.

ACADEMIC CREDIT

Academic credit is given for successful completion of courses in the Military Department, as stated in the appropriate college official publications.

DISTINGUISHED CADETS

At the conclusion of each term, selected cadets will be awarded The Distinguished Cadet Medal. Cadets so designated must meet the following qualifications:

Advanced Course

1. Academic Military standing in the upper 10% of the class.
2. A leadership rating of at least 80%.
3. In upper 10% of the class in attendance.
4. Not to exceed 5 demerits initially given.

ANNUAL AWARDS

Presented by	Award	For:	Awarded to:
American Legion Ithaca Post 221	2 Gold Medals	Rifle and Pistol Marksman-ship	Members having highest average scores in pistol and rifle competition.
Military Department	10 Medals	Proficiency in Marksman-ship	The five members each of the ROTC Pistol and Rifle Teams making the highest average scores in competition.
Sons of The American Revolution	5 Medals	General Excellence	Students selected for leadership, soldierly bearing, and excellence in the theoretical and practical work of the Advanced Courses in the AF, FA., Ord., Sig.C. and QMC., Units.
Mr. Charles Burns	Burns Memorial	General Excellence	Outstanding member of Pershing Rifles.
Army Ordnance Association	2 Silver Medals	Military Academic Excellence	To the two members of Ordnance Advanced Course who best exemplify the high standards of the Ordnance Department.
Military Department	Gold, Silver and Bronze Medals	Excellence in Drill	First three best drilled members of Pershing Rifles.
U. S. Field Artillery Association	Medal	Exemplifying the high standards of the Field Artillery	First Year Advanced Course F.A. student who best exemplifies the high standards of the Field Artillery.
"Scabbard and Blade"	Sabers	General Excellence	Outstanding First Year Advanced student in the AF, FA., Ord., Sig.C. and QMC., Units.
Army Signal Association	Medal and Scroll	General Excellence	Outstanding Student in Signal Corps or Air Unit.

Elementary Course

1. Academic Military standing in upper 3% of the class.
2. A leadership rating of at least 80%.
3. No unexcused cuts.
4. Not to exceed 6 demerits given initially.

HONOR GRADUATES

Those graduates who have completed the entire ROTC course, and who have been selected by the President of Cornell University for scholastic excellence, may be designated "Honor Graduates" by the Professor of Military Science and Tactics as possessing outstanding qualities of leadership, character, and aptitude for military service. Such "Honor Graduates" are considered in selection of applicants for appointment in the Regular Army, provided they are eligible for appointment under other pertinent laws and regulations.

G. I. BILL OF RIGHTS

Any emoluments mentioned above are *in addition* to benefits received through the "G. I. Bill of Rights."

The Elementary Course

The Elementary Course consists of formal instruction of 3 hours (2 lecture and 1 laboratory) a week for two academic years. This instruction is of a general type, is applicable to the Army as a whole, and is known as "Branch Immaterial." Classes are held at Barton Hall from 1:40 P.M., until 4:30 P.M., daily, Monday through Friday. Elementary Course students are required to receive training one afternoon each week. The uniform will be worn for this instruction.

QUALIFICATIONS

All students enrolled in the Elementary Course must:

- (a) Be not less than 14 years of age and must not have reached 23 years of age at the time of enrollment in the Elementary Course, except that the upper age limit will not apply to veterans of World War II enrolling in colleges prior to January 1, 1950.
- (b) Successfully complete such general survey or screening tests as may be prescribed.

METHODS OF INSTRUCTION

a. Practical instruction will be stressed, with maximum use being made of available training aids and equipment. Applicatory methods will be used for outdoor training, and, to the extent feasible in the classroom, with subjects being presented by demonstration, application by individual and group performance, examination by performance tests and problems, followed by discussion and critiques with student participation (see TM 21-250). The lecture-type method of instruction will be kept to a minimum.

b. Training objectives require that cadet officers and noncommissioned officers, or students acting as such, be utilized as assistant instructors and as leaders where appropriate. To this end, Army officers and noncommissioned officers, as instructors, will direct the development of cadet officers, and noncommissioned officers, supervise their work as assistant instructors and leaders, and advise them as to proper training techniques.

FIRST YEAR ELEMENTARY PROGRAM

**MILITARY SCIENCE (first year) 96 hours.*

	<i>Subjects</i>	<i>Hours</i>
a.	World Military Situation.....	16
b.	Military Organization.....	*
c.	Hygiene and First Aid.....	10
d.	Leadership, Drill, and Exercise of Command.....	36
e.	Individual Weapons and Marksmanship.....	20
f.	Maps and Aerial Photographs.....	10
g.	National Defense Act and ROTC.....	4
	Total.....	96

a. *World military situation (16 hours).*

(1) *Scope.*—Areas throughout the World will be studied in accordance with the following plan:

1. Raw material and industrial status of the area concerned.
2. The strategic position of the area concerned.
3. Points and sources of conflict in the area concerned.
4. Specific American interests in that area of the world.

b. **Military organization (8 hours).* Not given in 1947-1948.

(1) *Scope.*

- (a) The underlying theory of Army organization, with its salient framework discussed in simplified form, stressing (a) necessity for one leader for each unit or subdivision, (b) chain of command, (c) assignment of specific duties and responsi-

*Students will register for Military Science "E-1 or E-2" for the first or second term Elementary Course respectively.

bilities to all personnel, (d) integration of smaller units into larger teams, and (e) general design of military organizations to fit missions to be performed.

(b) Brief illustrative study of table of organizations as to their makeup and use.

(c) Instruction in the organization of the infantry squad, emphasizing duties of each squad member and organization of the squad for combat, with schematic sand table exercises utilized in teaching the principles thereof.

(d) Organization of the infantry rifle platoon and company. The functions and interdependency of operational and administrative elements of the company will be stressed. Study of platoon organization will include operational relationship of its component parts in performing missions in attack and defense with schematic sand table exercises conducted in teaching principles thereof. Comparison of infantry rifle platoon and company will be made with similar organizations of other arms and services.

(e) Organization of the infantry rifle battalion, including (a) general organization and mission of combat attachments, (b) relationship of operational and administrative parts of battalion in accomplishing combat mission in the attack, with small-scale schematic layout conducted as sand table exercises. Comparison of the infantry rifle battalion with similar units of other arms, stressing (a) triangular organization pattern followed by most of the arms, (b) major points of difference that exist because of varied missions.

(f) Organization of the infantry regiment, including (a) attached and supporting units which may assist in accomplishing its combat mission, (b) comparison of regiment with similar units of other arms.

(g) Organization of the Army Air Forces to include flights, squadrons, groups, wings, air forces, and air commands.

(h) A brief outline of the organization of the Army, to include division, corps, army, army group, and higher echelons.

c. Hygiene and first aid (10 hours).

(1) *Scope.*

(a) Personal hygiene; early medical treatment; care of body, mouth, feet, shoes, socks, cleanliness, blisters, athlete's foot, necessity of routine habits in daily bodily functions, regular physical examinations. Personal hygiene in the field; drinking water; prevention of insect bites; cleansing of eating utensils; trench foot; frostbite; jungle foot; immersion foot; improvised washing and bathing facilities.

(b) First aid in the field; dressing and protection of wounds; use of sulfa drugs (tablets); control of hemorrhage; control of pain; prevention of shock; use of first-aid packet and kits; applicatory exercises in bandaging; drowning, electrical shock, and carbon monoxide poisoning; artificial respiration; application of prone pressure method; first aid for common emergencies; snake and insect bites; fainting, unconsciousness; removal of foreign bodies.

(c) Organizational hygiene, and sanitation in garrison and in the field. Control of communicable diseases; control measures, respiratory, intestinal diseases; field water supplies, reconnaissance, purification in the field; waste disposal, human, liquid, garbage, rubbish; mess sanitation, inspection, handling, storage,

and preparation of foods; cleansing of cooking utensils; insect control, flies, mosquitoes, lice, miscellaneous diseases, tetanus, rabies, and scabies; acclimatization; march hygiene and camp sites.

(d) Thorough knowledge of the importance of sex hygiene and the methods of preventing venereal disease; effects of venereal disease upon the human body. The moral aspect will be stressed in this instruction.

(e) Responsibility of the individual leader and of the various services in the matter of health control.

d. *Leadership, drill, and exercise of command (36 hours).*

(1) *Scope.*—Principles of discipline, purpose of discipline, military courtesy, customs of the Army, wearing of the uniform, conduct of noncommissioned officers; general characteristics of military commands and orders; purpose of drill, drill of soldier with and without arms, squad and platoon drill, parades, reviews, inspections, other ceremonies; interior guard duty (duties of personnel, formations, orders, raising and lowering of the Flag, formal and informal guard mounts).

e. *Individual weapons and marksmanship (20 hours).*

(1) *Weapons (12 hours).*

(a) *Scope.*—The instruction should present: a detailed study of the U. S. rifle cal. .30, M1, to include description; characteristics; disassembly and assembly of barrel and receiver group, and the bolt; removal and replacement of gas cylinder lock and clip latch; disassembly, assembly, and functioning of the trigger housing group; functioning; operation; stoppages; immediate action; spare parts; appendages; accessories, ammunition; and care and cleaning. A brief study of the carbine, cal. .30, to include description, characteristics, disassembly and assembly of barrel and receiver group, and functioning. A study of the automatic pistol M1911A1 to include description, general data, disassembly and assembly, operation, functioning, spare parts and accessories, care and cleaning, and safety precautions. A brief study of the cal. .22 rifle to include characteristics, uses, care, and cleaning, and operation. Examination.

(2) *Marksmanship (8 hours).*

(a) *Scope.*—The principles of marksmanship, using the M1, will be presented to include demonstrations and student participation in sighting and aiming, positions, trigger squeeze, sustained fire, windage, scorebook, sight setting, dimensions of targets, safety precautions, and an examination. Range practice will be accomplished with the .22 rifle; interest will be stimulated therein through the medium of matches and competitions, both during duty and off-duty hours. Elements of carbine and pistol marksmanship will be demonstrated to show their comparable essentials with those of the M1 rifle.

f. *Maps and aerial photographs (10 hours).*

(1) *Scope.*—To include conventional signs and military symbols, marginal information, location by U.S. Domestic Grid System, direction, distance, elevation, use of compass, and elementary interpretation of aerial photographs and photomaps.

g. *National Defense Act and ROTC (4 hours).*

(1) *Scope.*—Evolution of the military policy of the United States as evidenced by its operation from the Colonial Wars through World War II, with particular refer-

ence to the procurement of officers, enlisted men, and to the constituency of the high command; basic provisions of the National Defense Act, its history, purpose, past operations, and future application to the Army; summarization of lessons from legislative and military policy learned in previous wars as pertinent in formulation of present defense policy; history and organization of the ROTC and ROTC regulations.

SECOND YEAR ELEMENTARY PROGRAM

**MILITARY SCIENCE (second year). 96 hours.*

	<i>Subjects</i>	<i>Hours</i>
a.	Leadership, Drill, and Exercise of Command	38
b.	Physical Development Methods	6
c.	Maps and Aerial Photographs	14
d.	Military Administration	8
e.	Evolution of Warfare	18
f.	Military Law and Boards	12
	Total	96

(1) *Scope.*

a. *Leadership, drill, and exercise of command (38 hours).*

(1) *Scope.*—Principles of discipline, military courtesy, customs of the Army, conduct of officers; general characteristics of military commands and orders; drill of the soldier with and without arms, squad and platoon drill, voice commands, parades, reviews, inspections and other ceremonies; review of interior guard duty.

b. *Physical development methods (6 hours).*

(1) *Scope.*

(a) Familiarization of the student with the objectives of the army physical training and athletics program. Theory and practice in leadership in group calisthenics, drills, and games. Methods and procedure of testing groups by use of the physical efficiency tests.

(b) The program will include instructional methods and commands for physical exercises; leading in warm-up and conditioning exercises; marching and running exercises; organized athletics and informal games; theory and practice of physical fitness testing.

c. *Maps and aerial photographs (14 hours).*

(1) *Scope.*—Complete review of previous instruction, and in addition, practical application of map reading and use of the compass, types of aerial photos, means of identification, and methods of orientation.

d. *Military administration (8 hours).*

(1) *Scope.*—Essentials of military correspondence, familiarization with the morning report, service record, sick report, duty roster, company property book, individual clothing and equipment record, statement of charges, pay allotment, officer's pay voucher, pay data card, record of leave, orders, 201 file, officer's efficiency report,

*Students will register for Military Science "E-3 or E-4" for the third or fourth term Elementary Course respectively.

soldier's qualification card, officer's qualification card, handling of unit funds, and mess management.

e. Evolution of warfare (18 hours).

(1) *Scope.*—A familiarization study, in outline form, of the unchanging principles of war, and of strategy and tactics as evolved from ancient through modern times, briefly illustrated by typical battles, campaigns, and wars in each major historical period. Principal changes in basic factors affecting warfare, to include a historical résumé of developments in weapons, fortifications, transportation, armor, navies, air power, guided missiles, and the atomic bomb. Accelerated development in modern times of chemical and biological warfare, intelligence, counterintelligence, and propaganda. The development of natural resources and industrialization as affecting warfare. The change from professional armies to complete mobilization of a country for war. Major points of similarity and differences in the conduct of World War I and World War II, to include employment of tactical and strategic aircraft and study of a specific air campaign in World War II. Modern development in military arms, equipment, and organization.

f. Military law and boards (12 hours).

(1) *Scope.*—Brief history of military law; Articles of War, origin and coverage; system of military justice; nature and types of courts martial; preventive and corrective measures; use of 104th AW; broad treatment of action before and during trial; applicatory exercises in type problems; boards and commissions, functions and distinction from courts martial.

The Advanced Course

GENERAL

The Advanced Course consists of formal instruction of 5 hours (4 lecture and 1 laboratory) a week for the last two years in the Department of Military Science and Tactics, corresponding to the junior and Senior years and is an elective course. Students who successfully complete the Elementary Course may apply for enrollment in the Advanced Course. When a student applies for the Advanced Course, credit may be given toward completion of the Elementary Course for training received at an educational institution having a Junior R.O.T.C. Unit, or for former military service.

The number enrolled in the Advanced Course varies from year to year, depending upon the number authorized the institution by the War Department.

In general, students selected for this course are those who have shown in the Elementary Course, outstanding potential qualities for "leadership and command", and whose intelligence insures their developing into efficient officer material.

The training of the Advanced Course student is divided into two distinct divisions: one, theoretical, involving study and recitations in the classrooms; the other, practical military work, involving exercises which will develop leadership and will promote a sound foundation for command duty after the receipt of a commission. As an illustration of theoretical classroom work, Military Problems of the United States, Psychological Warfare, and Military Teaching Methods may be cited. The supervision and training of Elementary Course students by the Advanced Course student, under the direction of Regular Army officer instructors, is an illustration of the means of developing leadership.

A student once admitted to the Advanced Course contracts to complete the course of training or continue therein as long as he remains a student at Cornell University. Should he fail to continue the prescribed course while a student at Cornell, he may be required to refund to the Government any sums previously paid.

QUALIFICATIONS

1. All students enrolled in the Advanced Course must—
 - (a) Not have reached 27 years of age at the time of initial enrollment in the Advanced Course.
 - (b) Successfully complete such survey and general screening tests as may be prescribed.
 - (c) Execute a written agreement with the government to complete the 2-year Advanced Course training and to attend one summer camp, preferably at the end of the first year.
 - (d) Completed appropriate elementary training (2 years ROTC or equivalent)
 - (e) Pass successfully a prescribed physical examination.

PRIOR SERVICE IN ARMED FORCES

Students who have had previous military training or service will receive such credit toward advanced standing in the ROTC as the Professor of Military Science and Tactics and the President of Cornell University may jointly determine within the limits of the following:

a. For previous honorable active service in World War II in the Army, Navy, Marine Corps, or Coast Guard:

- (1) Twelve months or more, credit not to exceed the entire elementary course.
- (2) Six months or more, credit not to exceed the first year of the elementary course.
- (3) Less than 6 months, no credit.

PROGRAM OF INSTRUCTION

A. The program of instruction for the Advanced Course for all units at Cornell, consists of subjects which are common to all arms and services and those which relate to a particular one. The following subjects are given in the Advanced Course to all students:

FIRST YEAR

**MILITARY SCIENCE (third year) 160 hours.*

	<i>Subjects</i>	<i>Hours</i>
a.	Military Leadership, Psychology, and Personnel Management.....	16
b.	Leadership, Drill, and Exercise of Command.....	16
c.	Geographical Foundations of National Power.....	12
d.	Military Law and Boards.....	12
e.	Tactics and Technique (arms, services and Air Force) Subjects.....	104
	Total.....	160

*a. Military leadership, psychology, and personnel management (16 hours).**Scope.*

(a) The close relationship between psychology, leadership, and personnel management; rise of military psychology; importance of individual differences in the Army; brief history of personnel administration.

(b) Job analysis in the Army, description and classification; classification and assignment of personnel; work, fatigue and efficiency; accidents and safety; problems of morale, in garrison and combat; reward and punishment; promotion and transfer.

(c) Personal adjustment to military life, and the officer as a personnel technician; use of manpower; training in the Army; the I&E system, its purposes and methods; educational opportunities, the Army school system; Army tests and their uses.

(d) Analysis of leadership; personal attributes and professional qualifications of the military leader; combat leadership.

(e) Principles taught will be illustrated by appropriate examples and applied by students in situation-type problems.

b. Leadership, drill, and exercise of command (16 hours).

Scope.—Conduct of officers in application of leadership in actual command during drills, parades, reviews, inspections, and other ceremonies; brief review of interior guard duty.

*c. Geographical foundations of national power (12 hours).**Scope.*

(a) The principles of geography and their influence in the division of peoples into nations; how such principles effect governmental policies and economic development, and determine war potential; geography as a factor in the varying inclination and aptitude of peoples for war.

*Students will register for Military Science "A-1 or A-2" for the first or second term Advanced Course respectively.

(b) The effect upon a nation's peacetime economy, war potential, and conduct of war, of the following: its size, location on earth's surface, and terrain; its rivers, harbors, agricultural, and mineral resources and their development; water barriers; climate; adequacy and control of communications and trade routes, to include present and future air lanes of the world.

(c) Current geographical questions of vital interest, such as uranium deposits of the world and the atomic bomb; the effect of possible discovery of new uranium deposits and other metals; possibilities of development of mineral resources in the arctic and antarctic regions.

(d) Specific analyses of the United States and other great nations as to their economic power; war potential; and their inclination, aptitude, and conduct of war, as conditioned by principles of geography outlined above.

d. *Military law and boards (12 hours).*

Scope.—Organization of courts martial, type, limitations, legal status of boards and courts martial; action before trial, preparation of charges, importance of accurate specifications, forwarding and investigation of charges, importance of expeditious handling; orders and jurisdiction of commanders; action during trial, procedure, duties of members of court, challenges, rules of evidence, pleas, attendance of witnesses, voting, practical work in moot, special and general courts martial; action after trial, proper preparation of record, action by reviewing authority, appellate review, disposition of record; boards and commissions, types and functions. Applicative exercises in court-martial procedure will be conducted, consisting of preparation of charges, "mock" trials, etc., illustrating the principles taught, consistent with time limitations.

SECOND YEAR ADVANCED COURSE

**MILITARY SCIENCE (fourth year) 160 hours.*

	<i>Subjects</i>	<i>Hours</i>
a.	Command and Staff.....	12
b.	Military Teaching Methods.....	12
c.	Psychological Warfare.....	4
d.	Military Problems of the United States.....	12
e.	Leadership, Drill, and Exercise of Command.....	16
f.	Military Mobilization and Demobilization.....	4
g.	Combat Intelligence.....	4
h.	Tactics and Technique (arms, services and Air Force) Subjects.....	96
Total.....		160

a. *Command and staff (12 hours).*

Scope.—Origins and purpose of the staff; staff organization (using division staff as a model with lower and higher echelons compared); relationship between com-

*Students will register for Military Science "A-3 or A-4" for the third or fourth term Advanced Course respectively.

manders and their staffs, and with subordinate and higher commanders and staffs; command channels and staff liaison; staff planning; staff forms, intelligence reports, commander's estimate of the situation, fragmentary and written orders, etc., messages; practical functioning of the battalion staff in combat operations, illustrated by examples from World War II, and situation-type problems containing principles taught.

b. Military teaching methods (12 hours).

Scope.

(a) Brief study of psychology of learning as contained in educational psychology.

(b) The five stages in instructional technique, and importance of each, viz:

1. *Preparation.*—Thorough mastery and organization of subject matter by instructor; specific objectives for class period and planning of teaching technique; selection and organization of materials, including training aids and equipment; allotment of time for each stage of teaching process; proper physical environment of students for instruction period.

Writing of lesson plans.

2. *Presentation.*—Brief introduction, arousing interest of students in subject, and stimulating their desire to learn. Necessity for proceeding from known to unknown, from simple to the complex. Utilization of several of five senses in learning process, i.e., sight, touch, hearing, smell, and taste. Value of training aids and equipment; actual equipment preferable, if available. Presentation by explanation, lectures, talks, or discussion led by instructor. Presentation by demonstration, through actual use of equipment or objects by instructor or demonstration team.

3. *Application.*—The psychological premise, students "learn to do by doing." Application by individual or team performance; coach and pupil method; use of principles in actual or situation-type problems. Need for repetition or drill. Short discussion, if advisable, prior to examination.

4. *Examination.*—Measurement of students' mastery of subject taught by performance without assistance. Types of tests, performance, written (new-type and essay), problems and reports. Administration of tests, observation of student behavior, evaluation of student performance.

5. *Discussion and critique.*—Final discussion and critique, with student participation, clarification of student difficulties,*summarization of instruction.

(c) Necessity for variety of instructional technique within five stages outlined above.

(d) Personal attributes of superior military instructor, knowledge, sincerity, public speaking ability.

(e) The Army officer has a supervisor of instruction; selection and training of instructors; observation and improvement of instruction; general problems of supervision.

(f) Proper use of equipment, and training aids, viz: objects, models, films, maps, charts, and posters.

(g) Opportunity will be given students, to the extent feasible, to conduct classes in other subjects as assistant instructors and apply the principles herein outlined.

c. Psychological warfare (4 hours).

Scope.

(a) Psychological warfare, a branch of psychology and as a part of war, historical examples; ideology, education and salesmanship as related thereto; psychological warfare and public relations, morale services, and civilian activities; its limitations, political, security, and media.

(b) Selection of personnel, organization, planning, propaganda intelligence and analysis, estimate of the situation; operations against troops, morale, news, surrender, and other leaflets, loudspeaker units, ultradestructive weapons; operations for civilians, shortwave and standard wave radio, mail, leaflets, pamphlets, subversive operations. Defensive psychological warfare, i.e., to counter the effects of surprise, such as a new weapon, or an effective propaganda attack. Psychological readiness and disarmament.

(c) Pertinent illustrations of psychological warfare as conducted in World War I and World War II.

d. Military problems of the United States (12 hours).

Scope.

(a) Brief historical background of our military problems from the Colonial Period to the present day; influence of our geographical expansion westward; growing natural resources and industrial progress; development of national consciousness; political growth; and emergence as a world power. Our military problems in history as influenced by industrialization of Europe, its ideologies and political upheavals, and interest in the Western Hemisphere.

(b) Present military problems of the United States as a world power, and brief review of our geographical foundations relating thereto. The influence of existing ideologies and political thought throughout the world. Factual analysis of our current problems in national defense, including growth in transportation and communications and their effect upon national security; the need for outposts and defensive bases; responsibility of the Armed Forces for the security of the United States; size and composition of the Army, Navy, and Air Forces presently required, and as related to manpower and racial problems; industrial support necessary for the Armed Forces.

(c) Role of the United States in the United Nations; military support of the United Nations by our armed forces; present trend toward "hemisphere defense;" existing military treaties; military influence of other great world powers upon future of the national defense organization of the United States.

e. Leadership, drill, and exercise of command (16 hours).

Scope.—Principles of discipline, military courtesy, customs of the Army, conduct of officers; general characteristics of military commands and orders; drill of the soldier with and without arms, squad and platoon drill, voice commands, parades, reviews, inspections and other ceremonies; review of interior guard duty.

f. Military mobilization and demobilization (4 hours).

Scope.

(a) Brief historical review of procedures in the mobilization and demobilization of the armed forces of the United States from the Revolutionary War through World War II.

(b) Current mobilization planning; authority to mobilize U. S. military forces; Regular Army units; induction of National Guard and Organized Reserves into the Army of the United States; universal selective service; and expansion of the armed forces; assembly of forces; coordination with materiel production.

(c) Current demobilization planning; its mechanics; disposition of personnel, property, and records, mail, and funds.

(d) Mobilization procedure for the armed forces of the United States in the event of a future war.

g. Combat intelligence (4 hours).

Scope.—Introduction; definitions; production of combat intelligence; duties of the individual soldier and small unit leader in gathering and reporting military information; duties of S-2's. Collection, collation, evaluation, and dissemination of information; observation; reports; intelligence specialist teams; handling of prisoners of war, enemy civilians, and repatriates, and captured documents and materiel; safeguarding military information.

B. The following courses are given as applicable to each arm and service and are in addition to those listed in paragraph A above:

AIR FORCES UNIT

The mission of the Air ROTC is to produce college trained officers primarily for the Air Reserve, and the Regular Air Force. The first year advanced course consists of instruction in the various administrative, tactical and technical aspects of the United States Air Forces. The second year advanced course consists of instruction in Communications and non-technical subjects. The specialized course in Communications is designed to qualify students for definite duty assignments in the Air Forces as Communications Officers.

During the six weeks' summer camp, normally attended between the first and second year of the advanced course, the student practically applies the theory learned in school, and receives instruction in special courses not practicable or advisable to be presented on the campus.

Admission to the Advanced Air ROTC Course will require applicants to successfully complete such general survey, screening tests, and physical examinations as are given by the AF to determine eligibility for admission to the Air Program.

FIRST YEAR

AIR FORCE SUBJECTS (104 hours).

	<i>Subjects</i>	<i>Hours</i>
(1)	History of the AAF	7
(2)	Organization of the AAF	6
(3)	AAF Training.	6
(4)	AAF Inspection Systems.....	6
(5)	AAF Statistical Control System.....	6
(6)	AAF Supply.....	9
(7)	Transportation.....	7
(8)	Navigation.....	10
(9)	Aeronautics.....	9
(10)	Meteorology.....	6
(11)	Communications.....	8
(12)	Air Intelligence and Combat Orders.....	8
(13)	Air Operations.....	11
(14)	Guided Missiles.....	5

(1) *HISTORY OF THE AF (7 hours).*

Scope. History of the progress and achievements of military aviation from 1892 to present date; evolution of aviation; activities after World War I; creation of Army Air Forces; Army Air Forces Global Warfare.

(2) *ORGANIZATION OF THE AF (6 hours).*

Scope. Organization and mission of the AAF; organization and functions of air staff, commands, and units to include the flight and the element; tables of organization.

(3) *AAF TRAINING (6 hours).*

Scope.—Development, organization, and administration of AF training; technical training; flying training; allied training; training standards.

(4) *AAF INSPECTION SYSTEMS (6 hours).*

Scope. Principles and procedures of AF inspections; inspection reports; purpose scope, and organization of AF inspections; Inspector General's duties.

(5) *AAF STATISTICAL CONTROL SYSTEM (6 hours).*

Scope. Organization and operation of the statistical control system; functions and objectives of statistical control officers and organizations; relation of statistical control to other staff agencies; operation of the AF reports control system; typical examples of standard AF reports processed and end product studies, analyses, and presentations developed therefrom.

(6) *AF SUPPLY (9 hours).*

Scope. Basic allowances; organization, procurement, procedures, responsibilities, and classification for AAF supply system; transfer of supplies and equipment to and from other arms and services; purchasing and contracting.

(7) *TRANSPORTATION (7 hours).*

Scope. Commercial and military transportation; vehicle and rail transportation; transportation requests and accommodations; transportation of individuals and units; operation and maintenance of motor pools; selection, training, and control of drivers.

(8) *NAVIGATION (10 hours).*

Scope. Maps and charts; dead reckoning, celestial and radio navigation; aircraft navigation instruments; radio compass, Loran, Shoran, radar, and federal aids to navigation.

(9) *AERONAUTICS (9 hours).*

Scope. Airplanes and associated equipment; aeronautical terminology; airplane types and construction, power plant types and characteristics; control surfaces and major components of the airplane; hydraulic and electrical systems; flight instruments; propellers.

(10) *METEOROLOGY (6 hours).*

Scope. Elementary weather conditions and their effects on operations.

(11) *COMMUNICATIONS (8 hours).*

Scope. Wire, Radio, and radar equipment used in AF communications; aircraft radio systems; ground radio equipment for navigational aids and liaison communication; military cryptography.

(12) *AIR INTELLIGENCE AND COMBAT ORDERS (8 hours).*

Scope. Strategic and tactical application of air intelligence; principles of combat intelligence, briefing and interrogation; coordination of photo intelligence with ground forces; interrogation of prisoners of war; security; espionage and counter-espionage; sabotage; propaganda; censorship; field orders.

(13) *AIR OPERATIONS (11 hours).*

Scope. A general survey of air operations; its execution and analysis of results to include the functions performed by staff sections at each command level from air force through wing, group, and squadron.

(14) *GUIDED MISSILES (5 hours).*

Scope. History, development, types, uses, and control of guided missiles; explosives used; rockets, jet bombs, and guided aircraft; fuel and propulsion; mechanical and remote control.

SECOND YEAR AIR FORCE SUBJECTS

COMMUNICATIONS (96 hours).

	<i>Subjects</i>	<i>Hours</i>
Introduction to AF Communications.....		2
Administration.....		11
Supply & Maintenance.....		11

<i>Subjects</i>	<i>Hours</i>
Radio Communications, General,	15
Aircraft Radio,	11
Ground Radio,	11
Survey of Radar,	22
Wire Communications,	11
Visual Communications,	2

(a) *Introduction to AF Communications—(2 hours).*

Scope.—Knowledge of communications in the Army Air Forces, and an objective survey of the duties and scope of the Communications Officer (SSN 0200) in the Air Forces.

(b) *Administration—(11 hours).*

Scope.—General knowledge of the administrative duties of a Communications Officer (SSN 0200).

(c) *Supply and Maintenance.—(11 hours).*

Scope.—Knowledge of supply and maintenance fundamental procedures in communications of the Air Forces.

(d) *Radio Communications, General—(15 hours).*

Scope.—General knowledge of radio communications fundamentals and methods and technique involved in the installation and operation of radio communication equipment.

(e) *Aircraft Radio—(11 hours).*

Scope.—General knowledge of typical aircraft radio communications sets, their general characteristics, and the operational and tactical uses; operation of component parts; calibrating and tuning; and 1st echelon maintenance.

(f) *Ground Radio—(11 hours).*

Scope.—Knowledge of the purpose and components of typical equipment for ground radio stations, knowing their characteristics, limitations, and tactical uses.

(g) *Survey of Radar—(22 hours).*

Scope.—An introduction to the fundamentals of radar and familiarization with typical radar equipments.

(h) *Wire Communications—(11 hours).*

Scope.—Knowledge of the operation, scope and characteristics of wire communications equipment and facilities.

(i) *Visual Communications—(2 hours).*

Scope.—Knowledge of the types, capabilities and use of visual communications means.

ARTILLERY UNIT

The field artillery unit was established at Cornell in January of 1919 and has greatly contributed to the record of Cornell men in both World Wars.

Field artillery instruction has been supplemented by instruction in antiaircraft and harbor defense artillery and the name of the unit changed to "Artillery Unit".

The artillery course affords instruction in such subjects as will qualify the student, upon graduation, to be commissioned in that branch of the service.

FIRST YEAR

TACTICS AND TECHNIQUE—ARTILLERY (104 hours).

<i>Subjects</i>	<i>Hours</i>
Artillery tactics.....	8
Basic gunnery.....	45
Characteristics and maintenance of artillery materiel.....	9
Communication.....	8
Motors and transportation.....	9
Organization.....	9
Service of the piece.....	11
Troop movements.....	5

(a) Artillery tactics (8 hours).

1. *Scope.*—Reconnaissance, selection and occupation of position for the antiaircraft 90-mm gun and 105-mm howitzer battalions and batteries with emphasis on the battery. Desirable characteristics and elements considered in selection of battery positions. Duties of battery officers and chiefs of sections in reconnaissance, selection, occupation, and organization of battery positions. Use of field fortifications. Instruction to include sand table work.

(b) Basic gunnery (45 hours).

Scope.—Interior and exterior ballistics to include terminology for all types of artillery; familiarization with the data found in firing tables; determination of firing data for observed terrestrial fire (only that data necessary for a ground observer); conduct of fire on ground targets to include precision and area fire, range and deflection bracketing. The antiaircraft gunnery problem to include: the linear speed method of solution; gunfire control systems; orientation and synchronization of the antiaircraft gun battery; theory of a computation for trial fire and calibration fire, and the use of trajectory charts therewith; adjustment of antiaircraft gunfire.

(c) Characteristics and maintenance of artillery materiel (9 hours).

Scope.—General characteristics of standard artillery weapons; general description and functioning of types of barrel and breech mechanisms, recoil mechanisms, carriages, sighting and laying equipment, and directors; characteristics, maintenance, and ammunition of the 105-mm howitzer M2A2 and the 90-mm gun M2 on AA mount M2.

(d) Communication (8 hours).

Scope.—Communication equipment of the 105-mm howitzer battalion and the 90-mm antiaircraft gun battalion; battery and battalion communication systems;

voice radio procedure, message writing, signal operation instructions, codes, ciphers, and communication security within these battalions.

(e) *Motors and transportation (9 hours).*

Scope.—Vehicle nomenclature and characteristics; echelons of maintenance; responsibilities of commanders for operation and maintenance of vehicles to include driver selection and training; conduct of inspections and inspection forms; tactical use of transportation within 105-mm howitzer battalion and 90-mm antiaircraft gun battalion.

(f) *Organization (9 hours).*

Scope.—General organization of the artillery to include the battery, battalion, division artillery, group and harbor defense, showing the levels at which such functions as mess, supply, staff, fire direction, intelligence, and liaison are found, and at what levels major items of equipment are added and the reasons therefor. Detailed coverage of the organization of a 105-mm howitzer battery and 90-mm antiaircraft gun battery, including the selection and duties of key personnel and the responsibility for their training.

(g) *Service of the piece (11 hours).*

Scope.—Service of the piece for the 90-mm antiaircraft gun and the 105-mm howitzer with only sufficient drill to familiarize students with the duties of cannoneers and personnel of the antiaircraft range section. Duties of the battery executive, battery recorder, and chiefs of gun, howitzer, and range sections.

(h) *Troop movements (5 hours).*

Scope.—General coverage of administrative and tactical movements of the battery, and terminology incident thereto. Preparation for and conduct of battery motor marches. Camps and bivouacs including camouflage and field sanitation.

SECOND YEAR

TACTICS AND TECHNIQUE—ARTILLERY (96 hours).

	<i>Subjects</i>	<i>Hours</i>
Artillery tactics, advanced.		22
Characteristics, capabilities, and limitations, of artillery materiel.		9
Gunnery.		42
New developments.		2
Supply and maintenance.		4
The military team.		11
Troop movements.		6

(a) *Artillery tactics, advanced (22 hours).*

Scope.—Tactics of artillery in the various support roles to include general support, direct support, and reinforcing missions to the infantry, airborne, and armored divisions; general principles for the employment of corps artillery. Tactical employment of antiaircraft guns in defense of small, large, and multiple objectives; tactical employment of antiaircraft automatic weapons in the defense of single objectives

and vital areas. Mission of seacoast artillery; tactical employment and missions of seacoast gun batteries, battalions (155 gun), AMTB batteries, and mine commands; normal disposition of batteries; general characteristics of standard naval vessels. Staff procedure and combat orders limited to the artillery battalion, artillery group, division artillery, and harbor defense level.

(b) *Characteristics, capabilities, and limitations of artillery materiel (9 hours).*

Scope.—Characteristics, capabilities, and limitations of medium and heavy artillery, and standard anti-aircraft automatic weapons to include the 155-mm howitzer, 155-mm gun, 40-mm anti-aircraft gun, and multiple guns on mount M-45; general description of fire control equipment for the above weapons; characteristics of artillery ammunition.

(c) *Gunnery (42 hours).*

Scope.—Unobserved fires to include preparation and use of firing charts; determination of map data and use of firing tables; determination and application of corrections of map data based on precision registration; K-transfers; metro corrections; center of impact, and high burst registration; position area survey; familiarization with the organization and operation of the battery and battalion fire-direction center. Brief review of anti-aircraft-gun gunnery problem; unseen fire control methods for 90-mm AA guns; the automatic weapons problem to include the angular travel method of solution, on-carriage fire control systems, off-carriage fire control systems, and tracer control systems. Familiarization with gunnery techniques peculiar to seacoast artillery to include position finding (horizontal and radar base), determination of firing data, pointing (laying) methods, spotting (sensing) and magnitude method of fire adjustment, classes and types of fire; radar position finding and spotting; the seacoast data computer.

(d) *New developments (2 hours).*

Scope.—New developments in artillery equipment to include major changes in weapons, ammunition, and vehicles; the effect of this new equipment on tactics, technique, and organization. Latest information on rockets and guided missiles.

(e) *Supply and maintenance (4 hours).*

Scope.—Classes of supply, supply channels, and procedure, evacuation channels; types and levels of supply maintained in units up to and including the group or similar unit.

(f) *The military team (11 hours).*

Scope.—Composition of the various military teams within the division, their missions, methods of employment, capabilities and limitations, and methods of coordination. Role and methods of coordination of tactical air forces in support of ground units. The coordination between anti-aircraft artillery and air forces in rear area defense. The seacoast artillery and naval forces in coast defense include the HECF-HDCP team, organization of sectors and subsectors, and coordination between seacoast artillery and mobile ground forces.

(g) *Troop movements (6 hours).*

Scope.—General coverage of administrative and tactical movements of the battalion. Preparation for and conduct of battalion motor marches and rail movements.

ORDNANCE UNIT

The Ordnance Department of the Army is charged with the design and development, manufacture or procurement, supply and maintenance of arms and ammunition. These items include automatic and other small arms; field, sea-coast, railway, and anti-aircraft artillery; propellants; high explosives; projectiles; artillery fuzes; bombs and other aircraft armament; tanks, trucks, and other vehicles; fire control instruments; etc. The work of the Ordnance Department consists of mechanical, metallurgical, chemical, and electrical engineering applied to military purposes. The Department, therefore, has a technical mission and a military mission.

The Ordnance Advanced Course supplements the technical instruction in the University with such military instruction and additional technical data as will qualify the graduate of the course for a commission as a Second Lieutenant of the Ordnance Section in the Officers Reserve Corps of the Army of the United States. Part of the Course affords opportunity for independent individual study and research in the field in which the student is registered. It will be designed to permit the maximum application of engineering principles along military lines.

Admission to the Advanced Course of the Ordnance Unit is open to students who are enrolled in any academic course of instruction leading to an engineering, technical, or scientific degree or, who demonstrate marked ability, aptitude, and interest in technical fields of endeavor.

FIRST YEAR

TACTICS AND TECHNIQUE—ORDNANCE DEPARTMENT (104 hours).

<i>Subjects</i>	<i>Hours</i>
Organization of the Ordnance Department	12
The place of ordnance in the military team	12
Maintenance and supply procedures	16
Ammunition:	
(1) Materiel	10
(2) Supply	6
Automotive materiel	18
Artillery materiel	10
Small-arms materiel	10
Fire control materiel	10

*(a) Organization of the Ordnance Department (12 hours).**Scope.*

- (a) Brief historical review of the role of the Department from its activation until

the present time. Organization and brief discussion of the operation of the Department during World War II. Lessons learned, revisions made (or planned) for post war organization. Functions of the several divisions of the Department. The Ordnance Department Board.

(b) Ordnance field installations—arsenals, depots, proving grounds, procurement district offices, and training installations. Geographical distribution of installations—major assignments of each. Typical organization of a manufacturing arsenal, a supply depot, a proving ground, and a training center. The history of a typical item of materiel from initiation of the need by the using arm through design, research, development, proof test, acceptance test, procurement planning, quantity production, modification, and finally, obsolescence by an improved item.

(b) *The place of ordnance in the military team (12 hours).*

Scope.—The responsibility of the major commands for ordnance service in the field and the training of ordnance troops; support of combat troops; contact parties; distribution, reclamation, and salvage operations; channels of supply for ordnance materiel; bomb disposal operations.

(c) *Maintenance and supply procedures (16 hours).*

Scope.

(a) Basic principles governing ordnance service to troops in the field, from the acceptance of an item of materiel from a manufacturer (or arsenal) until its final disposition as salvage.

(b) Discussion of storage and stock control procedures; echelons of maintenance; mission and assignment of ordnance troop units of all echelons, including review of tables of organization and equipment for these units.

(c) Study of the maintenance load and flow of supplies, stressing methods of control and accounting thereof, as it existed in a typical theater of operations.

(d) *Ammunition.*

1. *Materiel (10 hours).*

Scope.—Classes and types of ammunition materiel including artillery and small arms ammunition, bombs, flares, rockets, grenades, mines, and fuzes. Performance characteristics and tactical employment of major types.

Function, design, construction, nomenclature, and principles of operation of ammunition components, including brief discussion of explosives chemistry, and the ballistics theory pertinent to the presentation.

2. *Supply (6 hours).*

Scope.—Demonstration familiarization with methods for storing and transporting ammunition in Z/I and combat locations, including coverage of quantity-distance tables, methods of packing and marking, bomb finning and fuzing. Methods for field and base inspections, renovation and destruction of unserviceable ammunition.

(e) *Automotive materiel (18 hours).*

Scope.

(a) Survey of the types of automotive vehicles for which the Department is responsible. Classification of military vehicles. Performance characteristics and normal utilization of different types of vehicles.

(b) Function, design, construction, nomenclature, and principles of operation of components of automotive vehicles.

(c) Familiarization with operation; organizational, ordnance field and ordnance base maintenance operations as applicable to automotive materiel.

(f) *Artillery materiel (10 hours).*

Scope.

(a) Survey of types of artillery materiel, including recoilless guns and vehicle-mounted weapons and rocket-launchers. Performance characteristics, salient construction features, and tactical employment of major types.

(b) Function, design, construction, nomenclature, and principles of operation of artillery components, including brief discussion of interior and exterior ballistics pertinent to the presentation.

(c) Familiarization with emplacement and firing of a few typical artillery weapons; familiarization with organizational, ordnance field, and arsenal maintenance operations for artillery materiel.

(g) *Small-arms materiel (10 hours).*

Scope.

(a) Survey of types of small-arms materiel, including unmounted rocket launchers. Performance characteristics and tactical employment of the various types of small arms.

(b) Function, design, construction, nomenclature, and principles of operation of small-arms weapons; demonstration familiarization firing, including familiarization with organizational and ordnance maintenance.

(h) *Fire control materiel (10 hours).*

Scope.

(a) Survey of types of fire control materiel, including directors, remote control system components, height finders, telescopes, binoculars, range finders, periscopes, data computers, plotting boards, gunner's quadrants, computing sights, watches and compasses, as used in conjunction with field, antiaircraft, coast defense, and vehicle-mounted artillery materiel. Performance characteristics and tactical employment of major types.

(b) Function, design, construction, nomenclature, and principles of operation of fire control materiel, including brief discussion of underlying optics and electronic principles pertinent to the presentation.

(c) Familiarization with emplacement (or attachment) and use of fire control materiel in conjunction with related artillery weapons. Familiarization with organizational and ordnance maintenance operations for fire control materiel.

SECOND YEAR

TACTICS AND TECHNIQUE—ORDNANCE DEPARTMENT (96 hours).

<i>Subjects</i>	<i>Hours</i>
Maintenance and supply procedures	8
Ammunition:	
Materiel	6
Supply	6
Automotive materiel	12
Artillery materiel	8
Small-arms materiel	6
Fire control materiel	10
Materiel specialty instruction	40

(a) Maintenance and supply procedures (8 hours).

Scope.—Calculation of basic loads and other ordnance planning involved in preparation for expeditionary operations. Review of recent changes in maintenance and supply procedures.

*(b) Ammunition.**1. Materiel (6 hours).*

Scope.—Discussion of and illustrative problems in the design, development, test, procurement planning, and manufacture of ammunition.

2. Supply (6 hours).

Scope.—Presentation of the present status of the ammunition materiel program, including test vs. standard vs. obsolete items and the current trends and developments in this field.

(c) Automotive materiel (12 hours).

Scope.

(a) Discussion of and illustrative problems in the design, development, test, and procurement planning of military automotive vehicles.

(b) Presentation of the present status of the automotive vehicle programs, including population distribution, test vs. standard vs. obsolete vehicles, and the current trends and developments in this field.

(d) Artillery materiel (8 hours).

Scope.

(a) Discussion of and illustrative problems in the design, development, test, procurement planning, and manufacture of artillery materiel.

(b) Presentation of the present status of the artillery materiel program, including population distribution, test vs. standard vs. obsolete items, and the current trends and developments in this field.

(e) Small-arms materiel (6 hours).

Scope.

(a) Discussion of and illustrative problems in the design, development, test, procurement planning, and manufacture of small-arms materiel.

(b) Presentation of the present status of the small arms weapons program, including test vs. standard vs. obsolete items, and the current trends and developments in this field.

(f) *Fire control materiel (10 hours).*

Scope.

(a) Discussion of and illustrative problems in the design, development, test procurement planning, and manufacture of fire control materiel.

(b) Presentation of the present status of the fire control materiel program, including test vs. standard vs. obsolete items and the current trends and developments in this field.

(g) *Materiel specialty instruction (40 hours).*

Scope.

(a) Supplementary instruction for ROTC students in one of the five classes of ordnance materiel, selection of class to be based on the field of engineering being studied by the individual student.

(b) Scope of the instruction for each class of materiel will consist of more detailed coverage of the scope prescribed previously in this program. Opportunity for independent individual study will be made available.

NOTE.—This course should be set up for individual students in conjunction with the engineering department in which the student is registered. The project should be so arranged between the military and the engineering authorities that the work will be mutually acceptable and will provide maximum application of engineering principles along military lines.

QUARTERMASTER UNIT

The Quartermaster Corps of the Army is charged in general with the procurement, storage, and issue of all supplies of standard manufacture and of all supplies common to two or more arms and services: the maintenance and operation of quartermaster transportation; research and development of rations, clothing, and equipage; the operation of a general service pool, stevedore service, and docks; the operation of bakeries, sales commissaries, salvage depots, laundries, shoe and textile repair, fumigation and bath, motor repair training, post headquarters and graves registration; and the procurement, training, conditioning, classification, and distribution of animals.

The course is of particular value to students specializing in courses of business administration, hotel operation, and agricultural subjects where their future occupation will parallel the functions of the Quartermaster Corps.

FIRST YEAR

TACTICS AND TECHNIQUE—QUARTERMASTER CORPS (104 hours).

<i>Subjects</i>	<i>Hours</i>
Administration of civilian personnel.....	14
Classification of supplies, use of stock catalogues and bases of allowances.....	10
Depot supply I.....	9
Organization and functions of the Quartermaster Corps.....	8
Organization for supply in the Army.....	3
Property accountability and responsibility.....	6
Station supply I.....	20
Organization, function, and operation of Quartermaster units.....	14
Unit and organization supply.....	20

(a) Administration of civilian personnel (14 hours).

Scope.—U. S. Civil Service Commission and its relation to the War Department; recruiting, appointment, and placement; job analysis, job description, and classification; promotion and reduction; efficiency ratings and reports; pay; leaves of absence; training; employee relations; retirement and separation.

(b) Classification of supplies, use of stock catalogues and bases of allowances (10 hours).

Scope.—Classification of supplies and equipment according to technical service, controlled and noncontrolled, expendable and nonexpendable, and post, camp, and station, organizational, and individual equipment; classes for storage and issue; use of supply catalogues, tables of organization and equipment, tables of allowances, tables of equipment, special lists of equipment, standard nomenclature lists, and tables of basic allowances.

(c) Depot supply I (9 hours).

Scope.—Missions and organization of the various types of depots in the zone of interior; relationship with chiefs of technical services, armies, posts, camps, and stations, and ports of embarkation.

(d) Organization and functions of the Quartermaster Corps (8 hours).

Scope.—Responsibilities of the Quartermaster Corps; organization and functions of the Office of the Quartermaster General and the installations under its control; organization and functions of the Quartermaster Corps in armies, Army Ground Forces, and Army Air Forces. Brief outline of organization and functions of the Quartermaster Corps in theaters of operations.

(e) Organization for supply in the Army (3 hours).

Scope.—A survey of the supply organization and functions of the office of the Under Secretary of War, Supply Division, War Department General Staff, technical services, depots, armies, ports of embarkation, and the Army Air Forces.

(f) Property accountability and responsibility (6 hours).

Scope.—Definition of terms; delegation of responsibility; responsibility of the commanding officer, company and detachment commanders, and individual; ac-

countability and responsibility of property and sales officers; accountability and responsibility in the theater of operations, posts, camp, and station clearance.

(g) *Station supply I (20 hours).*

Scope.—Supply organization of post, camp, and station; requisitioning and receiving supplies and equipment; Stock record account; issue, due-out, turn-in, memorandum receipt, and model stock procedures; shipments from station; stock reports; disposition of excesses.

(h) *Organization, function, and operation of Quartermaster units (14 hours).*

Scope.—Organization, mission, capacity, major equipment, methods of operation and employment of quartermaster units in theater of operation; operation, adjustment, and first and second echelon of maintenance of all organizational equipment.

(i) *Unit and organization supply (20 hours).*

Scope.—Determination of allowance; requisitioning procedures; automatic issues; unit supply records; transposition of excesses; disposition and replacement of unserviceable property; statements of charges and reports of survey; proper fitting of clothing and shoes; marking of clothing and equipment; layout and storage of supplies and equipment in the unit supply rooms; duties of, and record maintained by, battalion and regimental supply officer.

SECOND YEAR

TACTICS AND TECHNIQUE—QUARTERMASTER CORPS (96 hours).

<i>Subjects</i>	<i>Hours</i>
Depot supply II.....	26
Fiscal procedures.....	5
Procurement procedures.....	15
Station supply II.....	20
Storage, warehousing and materials handling.....	22
Quartermaster inspection service.....	8

(a) *Depot supply II (26 hours).*

Scope.—Depot stock control; the stock record accounts; machine accounting; processing of requisitions; adjustments; inventories.

(b) *Fiscal procedures (5 hours).*

Scope.—The War Department fiscal code; relationship between paying and obligating agencies; exercise of internal controls; preparation and defense of budgetary estimates; concept of commitments, obligations, and expenditures; methods of allotting and suballotting funds; the account and subsidiary records.

(c) *Procurement procedures I (15 hours).*

Scope.—Procurement laws and regulations; organization for procurement; invitations for bids; specifications abstract of bids; awards; negotiation procedure; receipt and inspection; use of master contracts; contract modification; bondings; post, camp, and station procurement problems; claims and claim adjustment.

(d) *Station supply II (20 hours).*

Scope.—Principles of property adjustment; discrepancies incident to shipment;

use of the Report of Survey (WD AGO Form 15-1) and over, short, and damaged report; inventories and adjustments; miscellaneous uses of inventory adjustment reports; periodic consolidation of memorandum receipts and consequent adjustments; transfer of property on memorandum receipt; complete transfer of accountability; miscellaneous property accounts.

(e) *Storage, warehousing, and materials handling (22 hours).*

Scope.—Space utilization and layout; stock locator systems; management of labor; materials handling and maintenance of materials handling equipment; equipment pools; receiving; correct storage of different types of supplies; placing and stacking supplies; storage of hazardous commodities; safety and fire precautions; inventories; shipping procedures.

(f) *Quartermaster inspection service (8 hours).*

Scope.—Organization of; mission; procedures used; inspection at origin and at destination; inspection for quantity, quality, and condition; process inspection; one hundred per cent inspection; lot-by-lot sampling; and problems of inspection.

SIGNAL CORPS UNIT

The Signal Corps at Cornell University has for its aim the instruction and training of students of the Engineering Schools in the mission and functioning of the Signal Corps of the Army. The aim of the Advanced Course is to add to the technical instruction of the Engineering Schools such tactical and military instructions and problems as will enable the graduate of the course to function as a second lieutenant in the Signal Corps of the Army of the United States. The course provides demonstrations and practical problems involving the use of the military wire and radio material.

Admission to the advanced course of the Signal Corps Unit is limited to those students who are enrolled in any one of the following curricula:

- a) Electrical Engineering
- b) Electronics Engineering
- c) Mechanical Engineering
- d) Any other curriculum leading to a baccalaureate degree in which the student is majoring in physics.

FIRST YEAR

TACTICS AND TECHNIQUE—SIGNAL CORPS (104 hours).

<i>Subjects</i>	<i>Hours</i>
Organization and missions of the Signal Corps	10
Organization of the Infantry and Armored Divisions; their signal and communication components	14
Communication security	8

<i>Subjects</i>	<i>Hours</i>
Signal orders.....	3
Message center and signal center procedure.....	16
Field wire communication fundamentals.....	22
Field radio communication fundamentals.....	22
Signal Corps photography.....	3
The place of the Signal Corps in the military team.....	6

(a) *Organization and missions of the Signal Corps (10 hours).*

Scope.

(a) *Organization.*—Organization of the War Department, Office of the Chief Signal Officer, theater of operations, communications zone, section of the communications zone, type field army; organization of the Signal Corps: standard T/O units and T/O&E 11-500 type Signal Service units; mission: all military signal communications from the War Department down to but not including the Division. Signal supply; signal intelligence; signal training; photography.

(b) *Objective.*—Understanding of Army organization; functions, missions, and capabilities of the Signal Corps.

(b) *Organization of the Infantry and Armored Divisions: their signal and communications components (14 hours).*

Scope.

(a) Organization, capabilities and employment of the Infantry Division; organization and functions of the Command, and General and Special Staffs; organization and functions of the Armored Division and utilization of its communication facilities; organization and functions of division headquarters, special troops, infantry regiment, division artillery, the combat team; relations with higher headquarters; tactics of the Infantry Division and the employment of troops; organization, functions, and capabilities of the Infantry Division Signal Company and its place in the Division; organization and functions of communication personnel of the Infantry Regiment and division artillery.

(b) *Objective.*—Knowledge of the major components of the Infantry Division, organizational functions of the Command, and General and Special Staffs. Understanding of the needs of an infantry division and armored division for communication services; organization, functions and capabilities of the Infantry Division Signal Company and the duties of its communication personnel. Understanding of the tactical functions of the Infantry Division and the employment of troops. Knowledge of the duties of communication personnel in the Infantry Division.

(c) *Communication security (8 hours).*

Scope.

(a) To provide the student with a knowledge of the basic information concerning security and its importance in Army communications and the basic procedures for preserving that security; definition and principles of communication security and its major components—cryptographic transmission and physical security; security in communication procedure; communication security control.

(b) *Objective.*—Knowledge of the principles of the three components of communication security; understanding of the procedure involved for maintaining security control.

(d) *Signal orders (3 hours).*

Scope.

(a) Explanation of and responsibility for the various types of signal orders issued at division level; classification of orders; value of field order to signal and communication officers; paragraph 5 of commander's field order; fragmentary field orders; signal annex to field order; signal unit order; purposes of standing operating procedure; Signal Unit SOP. Responsibility for the distribution of Signal operations instructions (SOI); preparation of SOI items.

(b) *Objective.*—To understand and recognize the various types of orders; familiarization with SOI and SOP items.

(e) *Message center and signal center procedure (16 hours).*

Scope.

(a) Responsibilities, organization, and factors governing the location and operations of message and signal centers; relationship of message center and signal center with users; duties of personnel related to the routing, recording, and filing of message traffic; processing and dispatching of traffic with assigned classification and precedence; military cryptography, difference between codes and ciphers, employment, responsibility; employment of messenger, sound, visual, and pigeon communication; dropped and pick-up messages; forms and equipment used; procedure and functions of personnel; application of message center and signal center procedure.

(b) *Objective.*—Knowledge of the functions and methods of operation of a message center and a signal center, and the duties and responsibilities of its personnel. Familiarization with the use and capabilities of military cryptography.

(f) *Field wire communication fundamentals (22 hours).*

Scope.

(a) The construction, maintenance, and operation of wire systems of the Infantry Division, including the definitions and types of wire systems; field wire splices and ties; simplex and phantom circuits; field switch-boards; circuit diagrams and line route maps; field telephone procedure, telephone directory, phonetic alphabet, urgent and conference calls; military symbols; teletype and telegraph systems; applications of the fundamentals of field wire systems.

(b) *Objective.*—Knowledge of the installation, operation, and maintenance of military wire systems and the capabilities of wire communication in the Infantry Division. Familiarization with line route maps, circuits diagrams, and military symbols.

(g) *Field radio communication fundamentals (22 hours).*

Scope.

(a) The employment of radio communication in the infantry division including the establishment of radio nets, general capabilities, terminology, and responsibility; fundamentals of radio wave propagation; operating regulations; assignment of frequencies and call signs; tactical units and station records; call up and answer; abbreviated form message; radio telephone procedure, calibration of field radio sets; application of the fundamentals of field radio communication.

(b) *Objective*.—Knowledge of the functions and capabilities of the field radio sets normally used within the division and the method of installing field radio equipment. Familiarization with the operating regulations of field radio nets.

(h) *Signal Corps photography (3 hours)*

Scope.

(a) Photographic services in the zone of interior and theater of operations; military photography, functions and capabilities of photographic equipment.

(b) *Objective*.—Basic knowledge of the employment of photographic service in the zone of interior and theater of operations; photographic procedure.

(i) *The place of the Signal Corps in the military team (6 hours)*.

Scope.

(a) Importance of military teamwork, necessity for signal and communication personnel in all operations; signal communication in the infantry combat team, task force signal communication; airborne signal communication; tactical signal supply; combat photography; combined operations signal communications; joint assault signal company.

(b) *Objective*.—Knowledge of how signal communication fits into the military team and the means by which this is accomplished.

SECOND YEAR

TACTICS AND TECHNIQUE—SIGNAL CORPS (96 hours).

<i>Subjects</i>	<i>Hours</i>
Wire communication—materiel	22
Radio communication—materiel	26
Applied signal communication (Division)	12
Signal supply and repair	20
Higher echelon signal communication and equipment	16

(a) *Wire communication—materiel (22 hours)*.

Scope.

(a) Functions and capabilities of various types of wire communication materiel normally used by the Infantry Division Signal Company including Wire-110-(), W-130-(); Telephone TP-6-(), TP-9-C-(), EE-8-(); Reel Units RL-26-(), RL-31; Reel Equipment CE-11; Switchboards SB-18/GT, BD-71, BD-72, and BD-96; Repeating Coil C-161; Telephone Repeater EE-89, Teletype-writer Set EE-97-(); Test Set TS-26/TSM.

(b) *Objective*.—Knowledge of the functions and capabilities of wire communication materiel normally used by the Infantry Division and the methods of installing and maintaining this equipment.

(b) *Radio communication: materiel (26 hours)*.

Scope.

(a) Functions and capabilities of the various type of field radio equipment normally employed by the infantry division including Frequency Meter Set SCR-211; Radio Sets SCR-193, 300, 399, 503, 536, 608, 619, 694 and AN/GRC-9.

(b) *Objective*.—Knowledge of the functions and capabilities of the field radio sets normally used by the Infantry Division, and the methods of installing and maintaining field radio equipment.

(c) *Applied signal communication (Division) (12 hours)*.

Scope.

(a) Signal communication problems confronting the Infantry Division during concentration, attack, pursuit, defense withdrawal, and river crossings.

(b) *Objective*.—Knowledge of the signal communication problems confronting the Infantry Division during various tactical situations.

(d) *Signal supply and repair (20 hours)*.

Scope.

(a) War Department and technical service systems of supply with emphasis upon signal supply; Signal Corps supply catalogues and supply publications; Signal Corps nomenclature system and Joint Army-Navy nomenclature systems; allowances and signal sections of tables of equipment; ordinary requests for supplies on property issue slips; disposition of unserviceable property; action on lost, destroyed, and damaged property; echelons of signal repair and maintenance; tropicalization; marking and packaging of equipment; preparation and editing of requisitions.

(b) *Objective*.—Knowledge of the War Department supply system and the principles of unit signal supply and repair. Familiarization with supply publications and sources of information pertaining thereto. Knowledge of the echelons of signal repair and maintenance, and the preparation of equipment for oversea movement and tropicalization. Knowledge of the preparation and editing of requisitions and action on lost, damaged, and destroyed property.

(e) *Higher echelon signal communication and equipment (16 hours)*.

Scope.

(a) Brief description and discussion of the functions and capabilities of various signal equipments and systems normally used in echelons above division including:

(1) *Wire*.—Telephone Centrals TC-2 and TC-4; fundamentals of carrier telephony and telegraphy; carrier telephone equipment TC-21, TC-22, and CF-7; complete 100-mile tactical carrier systems and their use with radio relay equipment.

(2) *Radio*.—Radio relay systems and equipment including AN/TRC-3; fundamentals of AN/TRC-1 and 4, Exciter Units O-5/FR, AN/FRR-3, AN/FGC-1, and typical low and high power fixed station transmitters BC-339 and PW-15.

(3) *Radar*.—Fundamentals of radar; general principles and tactical use of ground type gunlaying and searchlight equipment SCR-584, AN/MPG-1, and AN/TP-1.

(b) *Objective*.—Acquaintance with the signal communication systems and associated equipment used in echelons above the division level and to stimulate interest in military communication and signal reserve activities.

RECAPITULATION OF PROGRAM OF INSTRUCTION ELEMENTARY COURSE

SUBJECTS	<i>First Year Hours</i>	<i>Second Year Hours</i>
World Military Situation.....	16	
Military Organization.....	*	
Hygiene and First Aid.....	10	
Leadership Drill and Exercise of Command.....	36	38
Physical Development Methods.....		6
Individual Weapons and Marksmanship.....	20	
Maps and Aerial Photographs.....	10	14
National Defense Act and ROTC.....	4	
Military Administration.....		8
Evolution of Warfare.....		18
Military Law and Boards.....		12
	—	—
Total Hours:	96	96

*Not given in 1947-1948.

ADVANCED COURSE

SUBJECTS	<i>First Year Hours</i>	<i>Second Year Hours</i>
Military Leadership, Psychology, and Personnel		
Management.....	16	
Leadership, Drill, and Exercise of Command.....	16	16
Military Problems of the United States.....		12
Military Law and Boards.....	12	
Tactics and Technique of Selected Arm or Service.....	104	96
Command and Staff.....		12
Military Teaching Methods.....		12
Psychological Warfare.....		4
Geographical Foundation of National Power.....	12	
Military Mobilization and Demobilization.....		4
Combat Intelligence.....		4
	—	—
Total Hours:	160	160

Extracurricular Activities

THE BANDS... The Military Department at Cornell includes in its curriculum a Military Band Course, ("Big Red" Band) designated as B-1, B-2, B-3, or B-4, depending upon term in which the student is registered; i.e. a first term freshman would be registered in "B-1", if he pursued the Military Band Course under prescribed directives.

Every student required to take military training in accordance with university regulations must register for the appropriate term, i.e. E-1, E-2, E-3, or E-4. Concurrently with his pursuance of any of these courses, he may "try out" for the "Big Red" Band, which consists of 110 members. If he is selected by the band director as having the necessary qualifications for such membership, he may discontinue his regular military instruction and devote at least 3 hours a week in band practice. As long as he remains a member of the "Big Red" Band he may postpone the requirements for military training and if he remains a member throughout his freshman and sophomore years he will have completed the requirements of Cornell University for military training. The "Big Red" Band is not an R.O.T.C. Band but the Military Department is responsible for the discipline, marching, supply, and all training except that of a musical nature. This latter is the responsibility of a highly qualified professional musical director. Members of the R.O.T.C. may also be in the "Big Red" Band as an extra curricular activity.

The "Big Red" Band is recognized as one of the leading university bands in the east and habitually accompanies the football team on its annual trip to Philadelphia. It participates in events between the halves at varsity football games, and is associated with athletic events throughout the year.

The "R.O.T.C." Band is composed entirely of members regularly registered in and currently pursuing the R.O.T.C. course. It is an extra curricular activity and may excuse the student from about 4 hours a year in the regularly prescribed course in "Leadership, Drill, and Exercise of Command." The R.O.T.C. Band is a "feeder" for the "Big Red". Membership in the R.O.T.C. Band does not satisfy the university's requirements for military instruction.

THE CLEF CLUB... This is an honorary musical organization for the promotion of interest in the "Big Red" band by upperclassmen.

THE EQUITATION COURSE... The ROTC conducts riding classes throughout the regular and special summer sessions. Regular attend-

ance at a riding class satisfies the requirements of the Department of Physical Education.

Horse shows are activities of the Military Department. These are made possible during the winter due to the availability of a large riding hall.

Adequate stabling for a limited number of horses owned by individuals connected with Cornell University are available at the ROTC stables.

POLO . . . Polo team members are awarded the minor sports "C" by the Cornell University Athletic Association.

OFFICERS CLUB . . . Members of this club are cadet officer candidates or cadet officers in the ROTC.

PERSHING RIFLES . . . This is a national organization composed of specially selected elementary course students who possess special aptitude toward military training. Credit for this extracurricular activity is given by the Department of Physical Education.

THE RIFLE AND PISTOL CLUB . . . Rifle and pistol shooting activities at Cornell consist of varsity and ROTC teams and a rifle and pistol club. Members of varsity teams are awarded the minor sports "C" by the Cornell University Athletic Association.

THE PI TAU PI SIGMA . . . The Cornell Chapter of this National Organization is the ETA Chapter. The mission of this society is to stimulate interest in the Signal Corps.

SCABBARD AND BLADE . . . This is a national society composed of selected advanced course students to further interest in the ROTC.

SECTION II

R. O. T. C. Regulations

R. O. T. C. Regulations

A. ORGANIZATION

1. The Cornell R.O.T.C. is organized provisionally into a regiment of cadets, consisting of four battalions (Army Ground Forces), and one squadron (U. S. Air Forces).
2. Each cadet in the elementary course is enrolled at registration to attend one afternoon a week for a period of three hours and is assigned to the arm or service of his choice, if practicable. Upon reporting to his first class, he is assigned to a platoon and will remain as a member of that platoon for the duration of the school term.
3. Advanced Course cadets are likewise assigned to a platoon as cadet officers or cadet officer candidates and contingent upon the exigencies of their schedules, will remain with the same platoon for the duration of the school term.
4. Promotions to cadet officer and noncommissioned officer grades are made according to the direction of the Professor of Military Science and Tactics.

B. LEADERSHIP AND EXERCISE OF COMMAND

1. The chief mission of the Department of Military Science and Tactics in regard to the elementary course cadet is to bring out inherent characteristics of leadership ability that will enable him to take his place in the postwar world as a stalwart bulwark of American democratic principles.
2. To implement this mission, one-third of the elementary course and one twentieth of the Advanced Course are devoted to practical application of leadership and command methods on the floor of Barton Hall. These are laboratory periods.
3. *Conduct of Leadership and Command Hour.*
 - a) "First call" will be sounded two minutes prior to the announced hour of the class. At first call, students will commence assembling in their respective platoon positions.
 - b) "Assembly" will be sounded 2 minutes after first call. At assembly students will have fallen in at attention and roll will be taken.
 - c) At conclusion of roll call, platoons will be formed for inspection, which will be conducted by a member of the instructional staff.

d) Demerits will be given according to the following schedule:

- | | |
|--|----|
| (1) Personal appearance (hair-cut, shave, etc.)..... | 3 |
| (2) Late—Class or Drill (less than 5 minutes)..... | 3 |
| (3) Improper wearing of uniform..... | 3 |
| (4) Shoes not shined..... | 2 |
| (5) Indifference or lack of attention..... | 5 |
| (6) Reporting for drill without uniform..... | 10 |
| (7) The above and other demerits may be assessed by the
instructors as cases warrant. | |

e) At the conclusion of inspection, instruction will proceed in accordance with the schedule.

f) Students attending this hour are responsible for the subject material of the lesson schedule and may be called upon for explanation and demonstration of any of the military positions or movements included in prior instruction.

g) Students are graded in accordance with check list provided by senior instructor for the hour.

h) "Recall" will be sounded fifty minutes after assembly. Students will be dismissed immediately and must be seated in their respective classrooms ten minutes after recall has sounded.

C. *CLASSROOM PROCEDURE*

1. Students are responsible for subject matter of the assigned lesson and will be graded for recitations and short written tests.
2. Smoking is not permitted in classes except in certain advanced classes with the specific permission of the instructor.
3. Students will stand when asking a question or when reciting in the classroom.
4. Students will not be brought to attention for visiting officers excepting in the case of general officers.

D. *MILITARY COURTESY & WEARING OF THE UNIFORM*

1. The principles of military courtesy will be observed at all times. Cadets in uniform will salute officers at appropriate times while in Barton Hall.
2. The uniform will be worn by elementary students on the afternoon of their military instruction.
3. Advanced course students will wear the uniform to all leadership and command classes.

4. The uniform must be worn properly.

a) Incomplete or "mixed" uniforms are not authorized.

b) Demerits will be given for such offenses as rolled-up sleeves, no tie, and incompleteness, whether or not the offense is noted inside or outside of Barton Hall.

c) Dark brown shoes will be worn with the uniform and will be well shined at all times.

d) Dark brown or tan socks, without patterns, will be worn with the uniform.

E. *DEMERITS AND CUTS*

1. One cut will be given for each hour of unexcused absence.

2. A maximum of three unexcused cuts will be permitted for the elementary course. Cadets who exceed three cuts will be dropped from the course automatically and will receive no university credit therefor. Written examinations or tests missed because of an authorized unexcused cut, may be "made up" if taken prior to and including Friday of the week following. Responsibility for determining the work missed due to an absence rests exclusively with the student.

3. Unexcused lateness over five minutes is equivalent to one cut.

4. A student physically incapacitated for military training will either secure an excuse *in advance* from the Military Department or will subsequently present a satisfactory reason for his absence at the earliest practicable moment.

5. A minimum of ten demerits will be permitted each term. A cadet who receives in excess of 10 demerits will be dropped from the course and will receive no University credit therefor. However, demerits in excess of 10 may be made up by the performance of such extra duties as the Professor of Military Science and Tactics may prescribe, at the rate of one hour of duty for each demerit.

F. *GRADING SYSTEM*

1. To attain a passing grade for university credit, a cadet must average 60% for the term.

2. Examinations are given throughout the term in each subject.

3. A final comprehensive examination is given at the completion of each term.

4. The final mark in "Leadership"* is the average of the marks

*Campus activities are also weighted in this mark for Advanced Course students.

received in this subject throughout the term diminished by 1% for each demerit.

5. Determination of Final Term Grade is as follows:

	<i>Daily Class- room Work</i>	<i>Final Examination</i>	<i>Total Grade</i>
Advanced Course	70%	30%	100%
Elementary Course	60%	40%	100%

6. Students having an average of 85% or more for their daily classroom work are exempt from the final examination.

7. In the case of Advanced Course students failing a term's work such work may be repeated, if time in Cornell will allow.

G. BULLETIN BOARD

Cadets are responsible for notices on the bulletin board.